

"Cellular Functions in Urology"

April 20-21, 2018

University of Wisconsin, Health Sciences Learning Center

room 1335

Keynote Speaker

Zhou Wang, PhD, Professor and UMPC Chair in Urological Research, Director of Pittsburgh O'Brien Center, University of Pittsburgh



SPEAKERS

Visiting Speakers

Jill Macoska, PhD, Professor, Biological Sciences, University of Massachusetts-Boston, Boston, MA

Marcelino Rivera, MD, Mayo Clinic, Rochester, MN

Douglas Strand, PhD, Assistant Professor, UT Southwestern Medical Center, Dallas, TX

Miguel Verbitsky, PhD, Associate Research Scientist, Columbia University, New York, NY

Li Xin, PhD, Associate Professor, Molecular and Cellular Biology, Baylor, Houston, TX

University of Wisconsin Speakers

Dale Bjorling, DVM, Professor and Associate Dean, School of Vet Med, Co-Director O'Brien Center, Director of K12 Scholars Program, UW-Madison, Madison, WI

Jacques Galipeau, MD, Professor, Div of Hematology Oncology, UW-Madison, Madison, WI

Sheena Kerr, PhD, Associate Scientist, Dept Biomedical Engineering, UW-Madison, Madison, WI

Paul Marker, PhD, Professor and Associate Dean, Pharmacy, UW-Madison, Madison, WI

William A. Ricke, PhD, Professor, Director O'Brien Center, Dept of Urology, UW-Madison, Madison, WI

Bianca Tomasini--Johansson, PhD, Senior Scientist, Pharmacy Dept, UW-Madison, Madison, WI

Chad Vezina, PhD, Associate Professor, Dept of Comparative Biosciences, UW-Madison, Madison, WI

Brian Van Le, MD, Assistant Professor, Dept of Urology, UW-Madison, Madison, WI

K12 Scholar Speakers

Heidi W. Brown, MD, Assistant Professor, Dept of Ob/Gyn, UW-Madison, Madison, WI

Maryellen Kelly, CPNP, DNP, Clinical Associate, School of Nursing, Duke, Durham, NC

Teresa Liu, PhD, Assistant Scientist, Dept of Urology, UW-Madison, Madison, WI

Alejo Roldan-Alzate, PhD, Assistant Professor, Depts Mechanical and Biomedical Engr, Madison, WI

Tatyana Sysoeva, PhD, Research Scientist, Dept of Biomedical Engineering, Duke, Durham, NC

Mike Wood, DVM, PhD, Assistant Professor, Dept of Medical Sciences, UW-Madison, Madison, WI

Friday, April 20



AGENDA

- 8:00 Breakfast (HSLC atrium)
- 8:30 **Welcoming Remarks**
William A. Ricke, PhD, Professor, Director UW O'Brien Center,
Dept of Urology, UW-Madison
- 8:35 **Opening Remarks**
Norman Drinkwater, PhD, Interim Vice Chancellor for Research and Graduate Studies,
UW-Madison
- 8:40 **Opening Remarks**
Stephen Nakada, MD, Professor and Chairman, Dept of Urology, UW-Madison

Session I

Moderators: Chad Vezina and Jordan Vellky

- 8:45 **Current paradigms for understanding and managing benign prostatic hyperplasia**
Brian Van Le, MD, Assistant Professor, Dept of Urology, UW-Madison
- 9:10 **A Cellular Atlas of the Human Prostate**
Douglas Strand, PhD, Assistant Professor, Dept of Urology, UT Southwestern
- 9:50 **Identification of cell types and pathways in normal and disease states**
William A. Ricke, PhD, Professor, Director UW O'Brien Center,
Dept of Urology, UW-Madison
- 10:15 Break

Session II

Moderators: Kris Penniston and Kyle Wegner

- 10:30 **CXCL12/CXCR4-Mediated Procollagen Secretion Is Coupled To Cullin-RING Ubiquitin Ligase Activation**
Jill Macoska, PhD, Professor, Biological Sciences, U-Mass Boston
- 11:05 **Translational use of MSCs in Urology**
Jacques Galipeau, MD, Professor, Hematology/Oncology, UW-Madison
- 11:40 **Urinary Flow Dynamics in BPH - Effects of Bladder Neck Angle**
Alejandro Roldan-Alzate, PhD, Assistant Professor, Depts of Mechanical and Biomedical Engineering, UW-Madison
- 12:00 Lunch
HSLC Atrium

Session III

Moderators: Scott Reeder and Dalton McLean

- 1:00 **A genetic toolbox to spy on mouse prostate stromal cells *in situ***
Chad Vezina, PhD, Associate Professor, Dept of Comparative Biosciences, UW-Madison

- 1:30 **Inflammation and prostate epithelial lineage hierarchy**
Li Xin, PhD, Associate Professor, Molecular and Cellular Biology, Baylor
- 2:10 **Neuroendocrine cells: Mediators of prostate smooth muscle contractility**
Mark Cadena, PhD Candidate, Vezina lab, Pharmaceutical Sciences Program, UW-Madison
- 2:20 **Development of a microscale organotypic model of prostate cancer**
Sheena Kerr, Associate Scientist, Dept Biomedical Engineering, UW-Madison
- 2:35 Break

Session IV

Moderators: Tony Goldberg and Anne Turco

- 2:50 **Modeling and treating fibrosis in the urinary tract**
Paul Marker, PhD, Professor and Associate Dean, UW-Madison and
Bianca Tomasini-Johansson, PhD, Senior Scientist, UW-Madison
- 3:10 **Altered steroidogenesis on estrogen receptor activation in benign prostatic hyperplasia**
Teresa Liu, PhD, Assistant Scientist, Dept of Urology, UW-Madison
- 3:40 **Proteomics by mass spectrometry for molecular insights into hormone-induced lower urinary tract dysfunction in mice**
Sam Thomas, PhD Candidate, Ricke lab, METC Program, UW-Madison
- 3:50 **Impact of age and castration on prostate collagen organization**
Hannah Ruetten, PhD Candidate, Vezina lab, Comparative Biomedical Sciences Program, UW-Madison

Session V, Keynote Address

Moderator: David Jarrard

- 4:00 **Keynote: Inflammation, androgen signaling, and luminal epithelial barrier dysfunction in BPH**
Zhou Wang, PhD, Professor and UMPC Chair in Urologic Research, Director Pittsburgh O'Brien Center, University of Pittsburgh
- 5:00 **Closing Remarks**
William A. Ricke, PhD, Professor, Director UW O'Brien Center, Dept of Urology, UW-Madison
- 5:00-6:30 Poster Session
HSLC Atrium

Saturday, April 21

8:00 Breakfast (HSLC atrium)

Session VI, K12 Scholars Program #1

Moderator: Dale Bjorling

- 8:35 **Marketing Continence Promotion in the Community: The “Sell-ular” Level**
Heidi Wendell Brown, MD, Assistant Professor, Dept of OB/GYN, UW-Madison
- 8:55 **Regulation of conjugative transfer of b-lactam resistance from uropathogenic strains of *Escherichia coli***
Tatyana Sysoeva, PhD, Duke University
- 9:15 **Diabetes and the Pediatric Lower Urinary Tract**
Maryellen Kelly, CPNP, DNP, Duke University
- 9:35 **Urothelial response to targeted soluble and membrane bound IL-6 signaling**
Michael Wood, DVM, PhD, UW-Madison
- 9:55 **Large-scale CNV analysis provides insight into the genomic architecture of congenital anomalies of the kidney and urinary tract**
Miguel Verbitsky, PhD, Assistant Research Scientist, Dept of Medicine, Columbia University
- 10:30 Break

Session VII, K12 Scholars Program #2

Moderator: Will Ricke

- 10:45 **Improving Stone Disease Treatment by Accurate Phenotyping and Risk Stratification**
Marcelino Rivera, MD, Assistant Professor, Dept of Urology, Mayo Clinic
- 11:20 **What can the UW-Madison/U Mass-Boston O’Brien Center do for you?**
Dale Bjorling, DVM, Professor and Associate Dean, School of Veterinary Medicine, Co-Director O’Brien Center, Director of K12 Scholars Program, UW-Madison
- 11:55 **Closing Remarks**
William A. Ricke, PhD, Professor, Director UW O’Brien Center, Dept of Urology, UW-Madison
- 12:00 Adjourn

About the O'Brien Center

The UW-George M. O'Brien Center of Research Excellence is a research cooperative between the University of Wisconsin-Madison, University of Massachusetts-Boston, and the National Institutes of Health. Our goals are to:

- Identify factors that cause urinary dysfunction in aging men
- Build consensus around research approaches to model urinary dysfunction in rodents
- Provide opportunities for established investigators to transition into the field of benign urology
- Secure the future of urologic research by promoting development of the next generation of urologic researchers
- Disseminate urologic research knowledge

Dear Scientists,

On behalf of our O'Brien Center, we want to thank you for participating in this important scientific event.

We hope that you found the symposium informative and thought provoking. Your support, critical thinking, and time are incredibly valuable to us.

See you next year!

Gratefully yours,



Please visit and support the other O'Brien Centers of Excellence:



**George M. O'Brien
Urology Research Center**
UNIVERSITY OF WISCONSIN-MADISON



National Institute of
Diabetes and Digestive
and Kidney Diseases

